



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/814,638

03/22/2001

Harold Mattice

403450

6291

27717 7590 05/28/2008  
SEYFARTH SHAW LLP  
131 S. DEARBORN ST., SUITE 2400  
CHICAGO, IL 60603-5803

EXAMINER

D'AGOSTINO, PAUL ANTHONY

ART UNIT

PAPER NUMBER

3714

MAIL DATE

DELIVERY MODE

05/28/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/814,638	<b>Applicant(s)</b> MATTICE ET AL.	
	<b>Examiner</b> Paul A. D'Agostino	<b>Art Unit</b> 3714	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 13-14, 16-22, 24, 27-32 and 34-36 is/are pending in the application.  
     4a) Of the above claim(s) 1-12, 15, 23, 25, 26 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-14, 16-22, 24, 27-32, and 34-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

This responds to Applicant's Arguments/Remarks filed 02/11/2008. Claims 1-12 have been cancelled. Independent Claims 13, 24 and 31 have been amended. Claims 15, 23, 25-26, and 33 have been cancelled. Claims 13-14, 16-22, 24, 27-32, and 34-36 are now pending in this application.

### ***Response to Amendment***

1. Applicant states that the amendments of "position based system" and "wherein the bits received by a node are determined by the position of the node in the string" are to "merely clarify the existing claims to explicitly recite a position based system." Examiner respectfully disagrees in that the amendment adds a new limitation to the claim as to which data is actually received by the intended node not implicitly claimed heretofore and which changes the scope of the claims.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining

Art Unit: 3714

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
5. Claims 13-14, 16-22, 24, 27-32, and 34-36 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. US 5,890,715 to Gomez et al. (Gomez) in view of U.S. Patent No. 3,675,196 to Molloy et al. (Molloy) and U.S. Patent No. 6,002,686 to Mitts et al. (Mitts).

Referring to claims 13, 24, and 31, Gomez teaches a plurality of linkable gaming machines individually accessed, arranged in a string of N nodes (figures 5a and 5b and the detailed description thereof), with each node including up to M of the devices (lights, sounds, 4:55-60, synchronized ball release, 8:55-60). The host controller directly connected to only the first end of the string and having a data out terminal (the

Art Unit: 3714

machines automatically designate one of them as a master machine being the host controller 5:25-35 and 7:1-30). A plurality of local controllers respectively associated with the nodes, each local controller having a data in terminal and a data out terminal and including a M-bit shift register with the register positions respectively connected to device output terminals to which the devices of the associated node may respectively be connected (figure 5b and the detailed description thereof, 5:50-67, UART interfaces comprise shift registers); The data out terminal of the host controller being connected to the data in terminal of the first node and the data in terminal of each of the other nodes being connected to the data out terminal of the preceding node in the string so that the string of nodes provides a (MxN)-bit shift register (the daisy chain Connection of the machines in figure 5b and the detailed description there of along with the discussion of the UART interfaces cited above). Further regarding the power line connected to the controllers and a common line, Gomez states that RS232 cables are used to connect the pinball machines to one another (4:24-35). RS232 cables are known to contain Power lines.

However, Gomez fails to explicitly recite the specifics of a serial digital data stream including MxN bits followed by a strobe indicator so that the bits are sequentially loaded into and respectively fill positions of the bit register wherein the bits received by a node are determined by the position of the node in the string.

Molloy teaches the use of shift registers wherein a master controller communicates with local controllers and transmits pulse trains containing sets of data

bits in sequence to receivers at all the associated devices wherein each of the devices (lights) is controlled by a specific bit in a specific set of bits transmitted by the master controller (abstract, 8:39-9:4, 11:60-12:30).

It would have been obvious to one of ordinary skill in the art at the time of invention to include the shift register means of Molloy with the game system of Gomez in order to synchronize the lights on each of the pinball machines with one another (Gomez 4:56-57).

Directed to claim 24, the register positions inherently must indicate the status of the devices if they are to control the status of the devices. For instance if the light is to be on, then the shift register must indicate such in order to control the light since each position in the register corresponds to the operation of a light (on or off).

However, Gomez as modified by Molloy is not explicit wherein the position based system is one that a set of data received by a node is determined by the position of the node in the series.

Mitts teaches explicitly of a position based system wherein a set of data received by a node is determined by the position of the node in the series (Col. 3 and also; "Other identification protocols can be applied in addition to regular serial numbering, or instead of it. One possibility is to generate and agree on beforehand, between all the devices participating in the data transmission, an aperiodic set of numbers, such as the decimals of pi. The transmitting device provides sequentially, as identifiers of given cells in the cell flow, numbers from the said aperiodic set of numbers. Thus, the receiving device knows that if, e.g., numbers '-3-8-2' occur in a given position in the

Art Unit: 3714

agreed set of numbers, cell 2 should follow cells 3 and 8 which have been received sequentially. Since the statistical probability of two given numbers occurring sequentially in an aperiodic set is about 1/100, a counter cycle of a hundred cells is achieved effectively by a simple quantity identifier. Naturally, the set of numbers need not consist of numbers of the decimal system. Col. 3 Lines 61-67 and Col. 4 Lines 1-9) in order to provide a method "which can be used to identify the cells of a fast cellular data transmission flow to the accuracy required by the processing (Col. 2 Lines 26-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the method sequentially delivering data to nodes as taught by Mitts into the teachings of Gomez as modified by Molloy in order to provide a method "which can be used to identify the cells of a fast cellular data transmission flow to the accuracy required by the processing.

Regarding claim 14, wherein each of the local controllers is a microcontroller (5:7).

Regarding claims 16 and 27, wherein the serial digital data comprises binary data (Molloy 2:50-75). Motivational statement can be found above since the binary data transmission is included in the shift register system to be combined.

Regarding claim 17, see discussion of the rejection of claim 13 above. The lights are controlled and the lights are position based wherein each bit of the shift register

corresponds to the state/control of a light.

Regarding claims 18 and 28, wherein at least one device is an LED. The prior art fails to explicitly recite the use of LEDs as lights, however they do disclose the use of lights and controlling means for said lights. It is notoriously well known in the art to use LEDs as a replacement for standard lights or as a lighting means. Therefore it would have been obvious to one of ordinary skill in the art to use LEDs as lighting means since it is also well known that LEDs consume less power and are more durable than conventional light bulbs.

Regarding claim 19, please refer to the discussion above regarding claims 13, 17, 24, and 31. The system of Gomez as modified by Molloy and Mitts is a position based system.

Regarding claim 20, lights can be considered switches, on or off. And lights are one of the devices. Furthermore, Gomez teaches the games themselves are to be synchronized and therefore there are plenty of switches in a pinball game such as the ball release, paddles, etc (4:48-60).

Regarding claim 21, If the system is to control each element with a bit in a shift register and the system comprises M devices then the signal must include at least M bits as taught by Molloy (8:39-45). Motivation statement can be found above.



Regarding claim 22, the system of Gomez as modified by Molloy and Mitts provides a system and method wherein M bits are position based and address the status of each connected device.

Regarding claim 29, wherein the contents of the bit register is returned to the data in terminal of the host controller in response to the loading into the bit register of an output signal from the host controller (Molloy 12:15-30).

Regarding claim 30, wherein the devices are associated with a single gaming machine (Gomez 4:50-60).

Regarding claims 34-36, see rejections of claims 13, 17, 19, 24 and 31 above.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 13, 24, and 31 have been considered but are moot in view of the new ground(s) of rejection wherein Examiner has provided an explicit reference to position based output signals.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is provided in the Notice of References Cited.

Art Unit: 3714

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

9. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. D'Agostino whose telephone number is (571)270-1992. The examiner can normally be reached on Monday - Friday, 7:30 a.m. - 5:00 p.m..

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John M. Hotaling, II can be reached on (571) 272-4437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 3714

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John M Hotaling II/  
Primary Examiner, Art Unit 3714

/Paul A. D'Agostino/  
Examiner, Art Unit 3714